lipid synthesis, nevertheless, it suggests that in the early stages of maturation the cell is accumulating protein more rapidly than lipid. It is possible, therefore, that at the onset of differentiation the cell density does not decrease but actually increases. Our attempts to separate undifferentiated from early differentiating cells have been unsuccessful presumably because, for the above reasons, the density difference is too small.

The second observation refers to the changes in lipid composition of the tumor cells as they decrease in buoyant density. Similar changes have been observed in preliminary experiments with normal cells so this is not a feature unique to the tumor cell. Studies of the skin surface lipids of man by Downing and Strauss [25,26] have indicated that changes may occur in the lipid composition of the sebaceous cell as it matures and this is also implied in the studies on isolated human sebaceous glands by Summerly [27], but direct evidence has been lacking. These observations are of interest since they suggest that sequential gene activation may be occurring during the maturation of the sebaceous cell and that the term cytodifferentiation may, justifiably, be used to describe this process.

Even though less extensive studies have been made with normal gland cells, nevertheless the evidence so far available shows distinct differences from the tumor cells. Hence, while the tumor enables large numbers of cells to be easily collected for use in biochemical investigations, the data from such studies will need to be interpreted with caution until it can be confirmed on normal cells. Further studies with normal cells will define more clearly the uses and limitations of the tumor cells in the study of sebaceous cell differentiation. The cells obtained from both the tumor and the normal gland by these procedures are viable cells which are suitable for chemical and biochemical assays of relatively short duration. They are not intended for long-term incubation studies for which the cloned cell lines previously described by us [28] would be more suitable. Their advantage over the cultured cells is that they represent cells as they exist in the parent tissue and have not been exposed to an artificial environment as occurs with cells maintained in culture.

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Announcement

The Fourth Conference on Cutaneous Toxicity sponsored by the American Medical Association and the Society of Toxicology will be held at the Mayflower Hotel, Washington, D.C., May 9–11th, 1979. This continuing medical educational activity is acceptable for 12 credit hours in Category No. 2 for the Physician's Recognition Award of the American Medical Association. Registration fee $150 ($120 for AMA and SOT members; $85 for residents and retired physicians). For further information contact Dr. Joseph B. Jerome, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60601.